ADDITIONS TO THE FLORA OF THE WOLF ISLANDS, NEW BRUNSWICK FOR 1964[1]

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We made brief visits to the Wolves on July 1 and September 19, 1964. On our earlier trip we were accompanied by Professor Wesley N. Tiffney of Boston University and his son W. N. Tiffney, Jr., their principal objective being to collect samples for the study of the soil fungi of the islands.

Leaving the mycologists to their work, we decided to explore the bog at Southwest Cove on East Wolf. The barrier beach there was breached during a recent violent storm. This must have been an unusual event, for black spruces of great age were killed by flooding with salt water, and the beach itself was completely rearranged. We wanted to see what kinds of plants grew in the boggy area that flanks the barrier pond and extends well back from it. On one side of the pond where the spruces had been killed, there were relatively open areas quite free from mosses and other bog vegetation. Here were occasional plants of *Galium trifidum* and young plants of *Stellaria calycantha*. In one such opening was a small but rather dense matted growth which superficially resembled a *Stellaria*, but which, on close examination, suggested *Montia*. This was later shown to be *Montia lamprosperma* Cham. Its distribution is of considerable interest. Although of occasional occurrence on the coast of Maine from Boothbay to Cutler, it has not been found on Grand Manan nor further to the east in the Bay of Fundy. Except for solitary stations in eastern New Brunswick, Prince Edward Island and Nova Scotia, *Montia lamprosperma*, like so many of the Wolf Island species, is

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of strong boreal or even arctic affinity. So far as the pattern of its local distribution is concerned, it is an added example of the "Passamaquoddy Flora."

On September 19th, we revisited the bog at Southwest Cove and obtained excellent specimens of *Galium trifidum* L. var. *halophilum* Fern & Wieg. We were surprised to find typical *G. trifidum* in some abundance growing among plants of the variety. There was a noticeable difference in time of flowering of the two when growing together; *Galium trifidum* var *trifidum* was well along in its fruiting, while plants of var. *halophilum* were hardly beginning to fruit. No differences in fleshiness seemed to be evident, perhaps because both varieties were growing under the same conditions.

In a glade opening in the spruce forest within about fifty feet of the bog at Southwest Cove, but on somewhat higher land, we found a few specimens of *Aster Blakei* House. Because of extensive field experience with the plant, we are convinced that *A. Blakei* is indeed a hybrid of *Aster acuminatus* Michx. and *A. nemoralis* Ait., both of which occur on East Wolf Island. Here it occupies a niche somewhat intermediate between the usual habitats of its two putative parents.

Several times in earlier years we had seen clumps of *Anaphalis margaritacea* (L.) C. B. Clarke. Mostly these have been too immature for critical identification, but there seemed to be considerable variation in such characteristics as shape of leaves and condition of pubescence. On our September visit, we came upon a clone of Pearly Everlasting ing in the bushy field at the eastern end of East Wolf. These handsome plants had particularly noticeable bright green leaves and reminded us of garden plants we had seen of the same variety in Scotland earlier in the summer. It is the var. *margaritacea* of relatively northern or even subalpine situations. It has not been found on Grand Manan. Weatherby and Adams in the "List of the Vascular Plants of Grand Manan" (Contr. Gray Herb. **CLVIII:** 72, 1945) made the following comment about *Anaphalis margaritacea*: "The

Grand Manan plant belongs with var. *intercedens* Hara." Roland, in "The Flora of Nova Scotia" (Proc. Nova Scot. Inst. **XXI** part 3:500, 1945), mentions the typical variety as being scattered in northern Cape Breton and not being clearly defined elsewhere in the Province. This, then, is another of the boreal disjuncts of the Wolves, characteristic of Cape Breton, areas about the Gulf of St. Lawrence, northern New England and northward, most of which are absent from Grand Manan and the southern part of Nova Scotia.

One of the main objectives of our September trip was a further close examination of the area where we had collected our recently described *Epilobium nesophilum* Fern. var. *lupulinum* Hodgdon & Pike. We did find a heterogeneous population of Epilobiums there, but nothing matching our new variety which presumably matures early and had gone by. When we first discovered this locality, the only Epilobiums found were specimens of the var. *lupulinum*. On this recent visit, we were confronted by a totally different array of plants. Of this assemblage we have been able to sort out *Epilobium palustre* L. var. *palustre* and *E. palustre* var. *grammadophyllum* Haussk., both of which are new to the Wolf Islands list. Later in the day we found var. *grammadophyllum* also on South Wolf Island. In general, the populations of *E. palustre* were variable. Also, there were some rather unusual individuals, perhaps of hybrid origin between *E. palustre* and other species.

Two other new species for the Wolf Islands are *Polygonum Persicaria* L. and *Rubus hispidus* L., both of which were found in the cleared area at the eastern end of East Wolf.

In summary, the following taxa are added to the list of vascular plants of the Wolf Islands resulting from our collecting in 1964:

Polygonum Persicaria L. (East Wolf)
Montia lamprosperma Cham. (East Wolf)
Rubus hispidus L. (East Wolf)
Epilobium palustre L. var. *palustre* (East Wolf)
E. palustre L. var. *grammadophyllum* Haussk. (East Wolf, South Wolf)

Galium trifidum L. var. *halophilum* Fern. & Wieg. (East Wolf)
Aster Blakei House (East Wolf)
Anaphalis margaritacea (L.) C. B. Clarke var. *margaritacea* (East Wolf)

Some time ago we published a tabular inventory of the vascular flora of the Wolves, island by island (Rhodora **65**:82-96, 1963). Eight more species were reported resulting from our field work in 1963 (Rhodora **66**:61-62, 1964). We described two new varieties from the Wolves still more recently (Rhodora **66**: 140-155, 1964), and in this paper eight others are reported for the first time.

Table 1
Total taxa recorded — 332

	East Wolf	South Wolf	Fat Pot	Flat Wolf	Gull Rock
Comparative areas of islands	42	12	6	3	1
Taxa recorded	297	168	117	96	35
Ratio of taxa to area	7	14	19.5	32	35

Recently (Rhodora **66**:140-155, 1964) we discussed the phytogeographic relationships of the Wolf Island Flora, contrasting its pronounced boreal character to the much weaker boreal aspect of Grand Manan. We pointed out that the Wolf Islands had 43 boreal taxa, of which 10 species were shared with Grand Manan. *Epilobium palustre* var. *palustre*, which is found on both islands, should be added, making 11 shared species. Both *Montia lamprosperma* and *Anaphalis margaritacea* var. *margaritacea* from our recent collections, however, are markedly of boreal affinity and are absent from Grand Manan. The Wolf Islands, then, have 46 boreal taxa, of which 11 are shared. The two island groups together have a total of 57 boreal taxa, of which the Wolves now may be seen to have 80.7% while Grand Manan has only 38.6%.

Specimens of the 1964 collections are deposited in the University of New Hampshire herbarium (NHA).

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